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E-QUID: ANSWER /*Ear Nose Throat*

Tonsillolithiasis☆

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Clinical history

An asymptomatic 64 year-old man positive for human immunodeficiency virus (HIV), with a normal clinical examination of the oropharynx underwent computed tomography (CT) examination of the neck, thorax and abdomen (Figs. 1 and 2) as a part of his standard follow-up. Because of abnormal CT findings, the patient underwent additional cervical magnetic resonance imaging (MRI) of the neck (Fig. 3). Of note, the patient had never received any treatment for HIV infection.

☆ Here is the answer to the case Tonsillar anomaly previously published. As a reminder we publish again the entire case with the response following.

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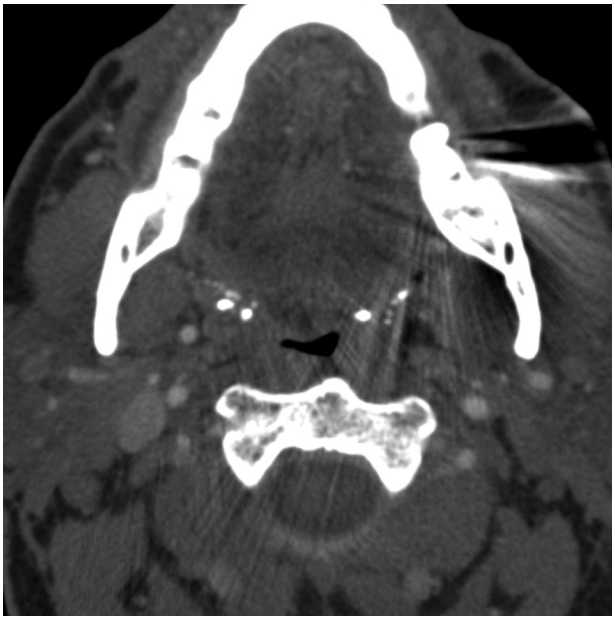

Figure 1. Cervical CT examination in the transverse plane after IV administration of iodinated contrast material.

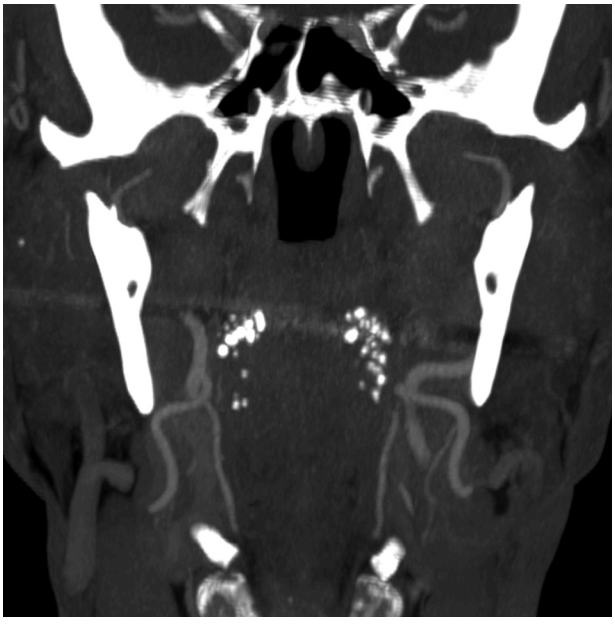

Figure 2. Cervical CT examination in the coronal plane after IV administration of iodinated contrast material using maximum intensity projection (MIP) reconstruction.

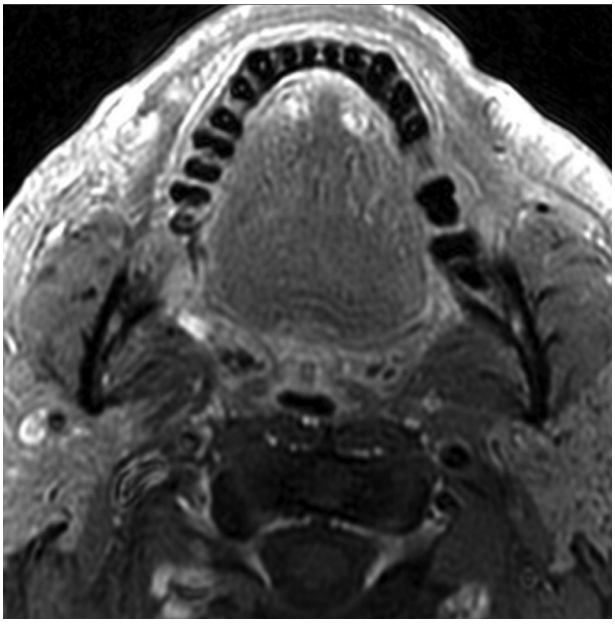

Figure 3. Cervical T1-weighted fat-suppressed MR image in the transverse plane obtained after IV administration of a gadolinium chelate.

Question

Based on clinical and imaging findings, which of the following diagnoses would be the most plausible:

- salivary lithiasis;
- fungal amigdalitis;
- benign tonsillolithiasis;
- tonsil lymphoma;
- tonsil lymphangioma.

Answer

Bilateral benign tonsillolithiasis.

Commentary

Figs. 4 and 5 show maximum intensity projection (MIP) reformatted CT images in the transverse and coronal planes. No abnormalities except multiple irregular infracentimetric hyperattenuating foci located in both palatine tonsillar areas are seen. The largest one is located in the right tonsil and measures 5 mm in size. Mean attenuation value is approximately 800 Houndsfield Units, consistent with calcification. No dental, salivary gland or other oropharyngeal

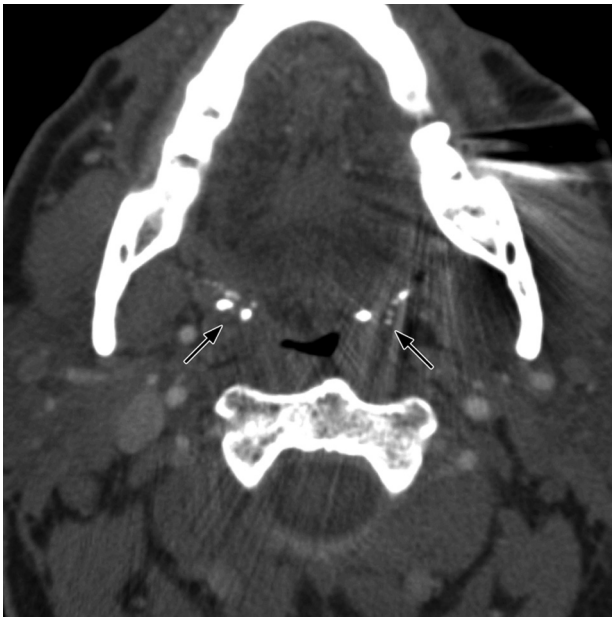

Figure 4. Cervical CT examination in the transverse plane after IV administration of iodinated contrast material in bone window shows hyperattenuating foci located in right and left palatine tonsillar areas (arrows).

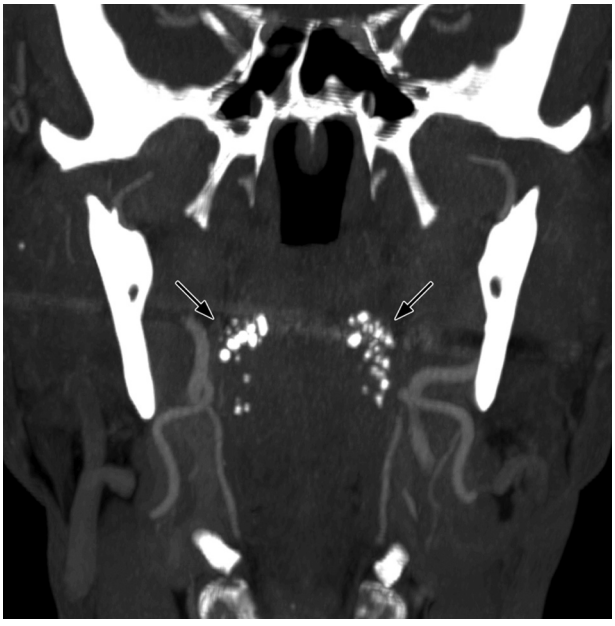

Figure 5. Cervical CT examination in the coronal plane after IV administration of iodinated contrast material using MIP reconstruction shows hyperattenuating foci located in right and left palatine tonsils (arrows).

tract anomalies are seen. Stenon or Wharthon ducts are not dilated and no salivary lithiasis is visible. Fig. 6 shows T1-weighted fat-suppressed MR image after intravenous administration of gadolinium chelate. The multiple calcifications present as areas of signal void. Tonsillar volumes and global morphology are however normal with no abscess or tumor. On T1-weighted fat-suppressed MR image after IV of gadolinium chelate tonsils show normal enhancement, thus

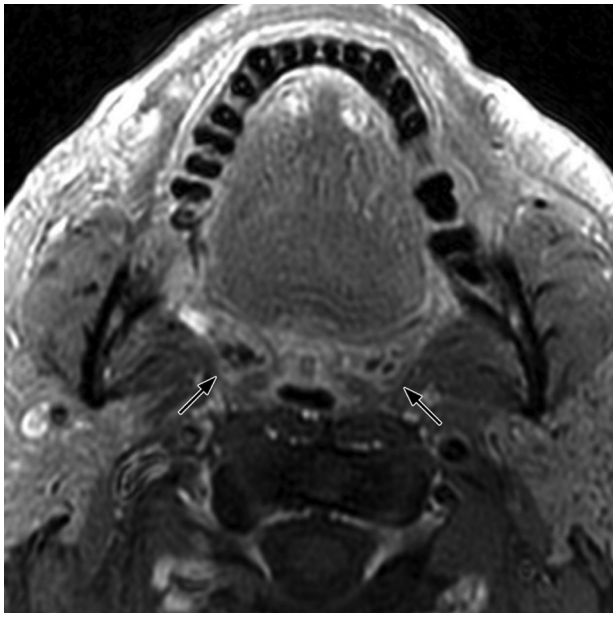

Figure 6. Cervical T1-weighted fat-suppressed MR image in the transverse plane obtained after IV administration of a gadolinium chelate shows foci of signal void located in the right and left palatine tonsils (arrows).

excluding inflammation. In accordance with CT findings, no other abnormalities are seen on MR imaging.

Discussion

This case reports a fortuitous diagnosis of tonsillolithiasis in a 64-year-old man positive for HIV who was never treated for this infection. Initial CT scan showed typical findings of tonsilloliths. MRI examination was performed to search for associated chronic tonsillitis.

Tonsilloliths are located in palatine tonsillar crypts and are described as concretions of calcium salts associated with saprophytic germs possibly resulting from chronic cryptic tonsillitis. Although microscopic tonsillolithiasis is quite common, multiple bilateral macroscopic tonsiloliths are rare and mostly asymptomatic. However, it can occasionally, according to tonsillolith size, be complicated by dysphagia and dyspnea requiring surgical resection. Approximately 30 cases have been reported since 1990. The majority of them consisted of giant unilateral tonsillolith causing dysphagia or dyspnea [1,2] and a very few were bilateral asymptomatic macroscopic tonsilloliths [3,4]. To our knowledge, MRI presentation of tonsilloliths have been described in only one report [5].

In our patient, no tonsillar enlargement was observed. However, the patient was found to suffer from mild chronic dysphagia in retrospect.

The microcalcifications observed in our patient spared the sub-maxillar and sub-lingual glands. So that the diagnosis of salivary lithiasis was excluded. Moreover, fungal amigdalitis was excluded in the absence of marked enhancement on MRI or tonsillar abces. No tonsillar calcifications secondary to HIV treatment have been reported in the literature.

In the presence of typical multiple calcic hyperattenuating tonsillar formations which can be seen on panoramic

dental X-rays, tomosynthesis [6], CT or MRI, no differential diagnosis exist in our opinion.

Disclosure of interest

The authors declare that they have no competing interest.

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